

XP-002203897

P.D. 12-D3-1269	I
P. A-607	

476.10

**TH3 CELLS ARE INDUCED BY ALPHA-MELANOCYTE
STIMULATING HORMONE (α -MSH).**

A.W. Taylor. Schepens Eye Research Institute And The Department of
Ophthalmology, Harvard Medical School.

The neuropeptide alpha-melanocyte stimulating hormone (α -MSH) is a potent suppressor of inflammation. Recently we have found that α -MSH suppresses IFN- γ production by activated Th1 cells. Although IFN- γ production was suppressed, the T cells continued to proliferate. It has been our goal to characterize the type of effector T cell activity that can be stimulated in the presence of α -MSH. Primed T cells that are TCR-stimulated in the presence of α -MSH proliferate but do not produce IFN- γ nor IL-4; however, they produce significant amounts of TGF- β . These α -MSH-induced, TGF- β -producing T cells are Th3 cells that suppress IFN- γ production by other Th1 cells. This suppression is mediated by TGF- β . Our results indicate that the α -MSH induced Th3 cells are CD4+ CD25+ (IL-2R α) cells. Other laboratories have shown that T cells with this phenotype suppress autoimmunity. Therefore, α -MSH suppresses DTH by mediating a deflection of Th1 into Th3 activity, possibly through expansion of CD25+ primed T cells. The results suggest an important role for α -MSH in mediating and maintaining peripheral tolerance especially in tissues such as the eye and CNS where α -MSH is constitutively expressed. Supported in part by PHS grant EY10752.



P.B.5818 - Patentlaan 2
2280 HV Rijswijk (ZH)
+31 70 340 2040
TX 31651 epo nl
FAX +31 70 340 3016



Europäisches Patentamt

Zweigstelle
in Den Haag
Recherchen-
abteilung

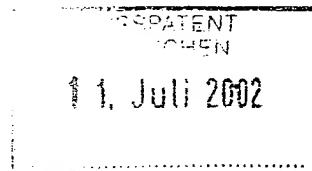
European
Patent Office

Branch at
The Hague
Search
division

Office européen
des brevets

Département à
La Haye
Division de la
recherche

Schurack, Eduard F.
Hofstetter, Schurack & Skora
Balanstrasse 57
81541 München
ALLEMAGNE



RECEIVED

NOV 07 2002

TECH CENTER 1600/2900

Datum/Date

11.07.02

Zeichen/Ref./Ref. 26128	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°. 00909957.3-2110-US0001608
Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire THE SCHEPENS EYE RESEARCH INSTITUTE, INC.	

RECEIVED

DEC 23 2002

COMMUNICATION

TECH CENTER 1600/2900

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





European Patent
Office

**SUPPLEMENTARY
PARTIAL EUROPEAN SEARCH REPORT**

Application Number

which under Rule 45 of the European Patent Convention
shall be considered, for the purposes of subsequent
proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
D, Y	<p>TAYLOR A W ET AL: "Alpha-melanocyte-stimulating hormone suppresses antigen-stimulated T cell production of gamma-interferon." NEUROIMMUNOMODULATION, vol. 1, no. 3, 1994, pages 188-194, XP008005225 ISSN: 1021-7401 * the whole document *</p> <p>---</p> <p>-/-</p>	1-31	<p>A01N63/00 C12N5/06 C12N5/08 A61K39/00 A61K35/12 A61K35/14 A61K48/00</p>
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
INCOMPLETE SEARCH			
The Search Division considers that the present application, or some or all of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for the following claims:			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search:			
see sheet C			
1	Place of search	Date of completion of the search	Examiner
EPO FORM 1503 03.82 (P04C20)	THE HAGUE	28 June 2002	Teyssier, B

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons
.....
& : member of the same patent family, corresponding document



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
D, Y	<p>TAYLOR A W & STREILEN J W: "Alpha-melanocyte stimulating hormone prevents induction of effector T-cell inflammatory activity." FASEB JOURNAL, vol. 10, no. 6, 1996, page A1206 XP002927877 Joint Meeting of the American Society for Biochemistry and Molecular Biology, the American Society for Investigative Pathology and the American Association of Immunologists; New Orleans, Louisiana, USA; 2-6 June 1996 ISSN: 0892-6638 Abstract 1194 ---</p>	1-31	
D, A	<p>LIPTON J M & CATANIA A: "Anti-inflammatory actions of the neuroimmunomodulator alpha-MSH." IMMUNOLOGY TODAY, vol. 18, no. 3, 1997, pages 140-145, XP002902200 ISSN: 0167-5699 ---</p>		
P, X	<p>TAYLOR A W: "Th3 cells are induced by alpha-melanocyte stimulating hormone (alpha-MSH)." FASEB JOURNAL, vol. 13, no. 4 PART 1, 12 March 1999 (1999-03-12), page A607 XP002203897 Annual Meeting of the Professional Research Scientists for Experimental Biology 99; Washington D.C., USA; 17-21 April 1999 ISSN: 0892-6638 Abstract 476.10 ---</p>	1-31	



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
T	TAYLOR A W & NAMBA K: "In vitro induction of CD25+ CD4+ regulatory T cells by the neuropeptide alpha-melanocyte stimulating hormone (alpha-MSH)." IMMUNOLOGY AND CELL BIOLOGY, vol. 79, no. 4, August 2001 (2001-08), pages 358-367, XP002203898 ISSN: 0818-9641 -----		
1			



European Patent
Office

**INCOMPLETE SEARCH
SHEET C**

Application Number
EP 00 90 9957

Although claims 1-5, to the extent that the method is practised *in vivo*, and claims 6-19, 24-31 in totality are directed to methods of treatment of the human or animal body (Article 52(4) EPC), the search has been carried out and based on the alleged effects of the composition.